Document Title:

Draft, Summary Report for Group VI Potential Release Locations, Site Inspection, Former Marine Corps Air Station, El Toro, California, October 2008.

Reviewer: Mr. Quang Than, *Remedial Project Manager, California Department of Toxic Substances Control, Office of Military Facilities, Southern California Operations Branch, Letter dated 26 November 2008.*

Comment No.	Comment	Response
1.	DTSC concurs with the NFI recommendation for all PRLs except PRL 354.	Comment Noted.
2.	PRLs 605 and 606:	
a.	The former MCAS El Toro background value for arsenic is listed as 6.86 mg/kg. Because DTSC also saw this background listed as 8.5 mg/kg in another El Toro document, please verify what the appropriate background for arsenic is.	The former MCAS El Toro background value of arsenic of 6.86 mg/kg is a statistically derived value based on the 95th quantile. The 8.5 mg/kg value is the maximum reported arsenic concentration in the dataset used to derive the statistical arsenic background value (BNI 1996).
b.	The Report states that upon transfer, the new land owner will be notified about the presence of these localized elevated arsenic concentrations. Please explain in detail how the notification procedure will be documented, recorded, and implemented such that the new land owner will absolutely be notified.	These buildings are in a Carve-Out that is included in the MCAS El Toro Finding of Suitability to Transfer (FOST) #5. To notify the new owner, the FOST includes the standard attachment titled "Hazardous Substances Notification Table". The Hazardous Substances Notification Table includes a pesticides notification for this Carve-Out. The aforementioned table will be included as an Exhibit to the deed of transfer. The FOST will also be incorporated by reference in the deed. In addition, the deed will also include a separate notification of pesticide use.
3	PRL 354: According to the Report, the cumulative cancer risk due to potential exposure to reasonable maximum exposure point concentration (EPC) of constituents analyzed is $2x10^{-5}$. The cumulative carcinogenic risk corresponding to a benzo(a)pyrene equivalent EPC value of 1,068 µg/kg is $2x10^{-5}$. If the statistical outlier is not included in the risk assessment, the cumulative cancer risk reduces to $9x10^{-6}$. DTSC notes that the cumulative cancer risk falls in the middle of the risk management range of 10^{-6} to 10^{-4} whether the outlier is included or not. It appears that PRL 354 has polycyclic aromatic hydrocarbon (PAH) contamination in surface soil that could pose risks to human health. DTSC does not concur that the available information is adequate to support an NFI decision.	As stated in the previously approved Final Site Inspection Work Plan (Earth Tech 2008) (and further noted in Section 3.2 and Figure 2 of the Main Report), "if the carcinogenic risk is greater than 10^{-6} but is within the NCP-defined risk management range of 10^{-6} to 10^{-4} ....., then other lines of evidence" are further evaluated to support the No Further Investigation (NFI) decision. This is consistent with the NCP preamble (Federal Register, Volume 55, No.49, Page 8717) that includes the following statement and guidance in evaluating risk within the risk management range: "Preliminary remediation goals for carcinogens are set at a 10^{-6} excess cancer risk as a point of departure, but may be revised to a different risk level within the acceptable risk range based on the consideration of appropriate factors including, but not limited to: exposure factors, uncertainty factors, and technical factors." Consequently, the Report will be revised to incorporate other key elements/information discussed below that are supportive of an NFI decision for this Potential Release Location (PRL). The recommendation of NFI for PRL 354 is based on multiple factors, particularly the following: **Exposure Factors** The PAHs in the PRL 354 soil originate from clay pigeon fragments scattered predominantly in areas designated as shot fall areas. These shot fall areas correspond to areas with the highest probability for the clay fragments to fall following impact. The sampling conducted during this investigation was judgmental by design and focused on assessing the potential releases in these high probability areas. As a result, the PAH concentrations reported are expected to represent biased high concentrations. The sampling from these areas showed sporadic and limited occurrence of PAHs. The corresponding risk screening yields an overestimate of risk because exposure point concentrations are calculated using these biased high concentrations.

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		In addition, the calculated risk is based on conservative assumptions that tend to overestimate the risk to a hypothetical resident. It should be noted the planned reuse for this area is designated to be part of a proposed golf course or open space. As a result, the potential exposures to any elevated PAH concentrations are expected to be significantly lower because of the rather 'sporadic/limited' occurrences of PAHs within the subject area and the intermittent presence of receptors. **Uncertainty Factors** Estimating the exposure point concentration (EPC) through the use of the 95 percent UCL will typically yield a conservative upper bound value of the calculated potential risk. This is potentially more exaggerated at PRL 354 due to the biased sampling design. In addition, there is a need for consideration of the uncertainties associated with the use of benzo(a)pyrene (BAP) potency equivalency factors in the risk quantitation. These factors are based on estimates derived from values extrapolated from animal studies and are generally regarded as conservative. In addition, the risk assessment assumes the PAH concentrations would also be readily bioavailable, where this may not be the case with the PAHs in a clay pigeon matrix. The recommendation for NFI at PRL 354 was based on the following factors: • An estimate of the risk using data from areas with the highest probability of containing clay pigeon fragments yielded exposure point concentrations that yielded site risks within the risk management range. This calculated risk potentially overestimates the site risk because PAH detections are highly localized and the sporadic distribution is limited to shot fall areas. • Uncertainty associated with the risk evaluation includes conservative approach of using exposure point concentration using the 95 percent UCL and use of BAP potency equivalency factors result in conservative estimates of risk. With biased sampling and other conservative risk factors used, the computed carcinogenic risk for this hypothetical residential scenario is still within the EPA-established risk management range of 10^{-6} to 10^{-4}. • The main technical factor is that the sampling conducted was designed to be biased in order to capture the impacted areas at the site (ITRC 2003). The results from the sampling indicate that there is not a widespread release of PAHs, rather sporadic/limited and mostly surficial in nature. • Lastly the calculated risk is within the same order of magnitude as the ambient risk associated with PAHs in Southern California (Environ 2004).

References:

Bechtel National, Inc. (BNI). 1996. *Final Technical Memorandum, Background and Reference Levels, Remedial Investigations, Marine Corps Air Station El Toro, California.*

Earth Tech, Inc. (Earth Tech 2008) *Final Site Inspection Work Plan, Potential Release Locations, Former Marine Corps Air Station, El Toro, California.* Long Beach, CA:

Environ 2004. *A Methodology for Using Background PAHs to Support Remediation Decisions.*

Interstate Technology and Regulatory Council (ITRC). 2003. *Characterization and Remediation of Soils at Closed Small Arms Firing Ranges.* January.

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Subject Response to Comments - Draft Summary Report for Group VI Potential Release Locations Report, Site Inspection, MCAS El Toro

Quang-

Attached are the Navy's response to comments on the Draft Summary Report for Group VI Potential Release Locations (PRLs) Report, Site Inspection for your review. The Navy would like to set up a conference call with you to discuss the responses sometime next week. I propose we have a conference call next Thursday, 19 March 2009 at 1 p.m. Please let me know if you are available at that time or if there is a better time during next week for you to discuss the responses. Please let Content or I know if you have any questions during your review.

Thanks-

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